



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,400	03/18/2004	Thomas Eisenhammer	36076US1	5522

116 7590 07/13/2007  
PEARNE & GORDON LLP  
1801 EAST 9TH STREET  
SUITE 1200  
CLEVELAND, OH 44114-3108

EXAMINER

WARD, JESSICA LEE

ART UNIT	PAPER NUMBER
----------	--------------

1733

MAIL DATE	DELIVERY MODE
-----------	---------------

07/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Interview Summary

Application No.

10/803,400

Applicant(s)

EISENHAMMER ET AL.

Examiner

Jessica L. Ward

Art Unit

1733

All participants (applicant, applicant's representative, PTO personnel):

(1) Jessica L. Ward.

(3) \_\_\_\_\_.

(2) Mr. Solomon.

(4) \_\_\_\_\_.

Date of Interview: 10 July 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: \_\_\_\_\_.

Identification of prior art discussed: \_\_\_\_\_.


Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant proposed after-final amendment (attached to interview summary). Examiner agreed that proposed amendment appears to overcome the prior art of record. However, Examiner informed Applicant that such an amendment would require further consideration and/or search.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

10/803,400

FACSIMILE TRANSMISSION RECORD / COVER SHEET  
TO

Name EXAMINER LWARD  
Company or Firm USPTO  
Facsimile Tel. No. 571-273-1223

FROM  
PEARNE & GORDON LLP  
1801 East 9<sup>th</sup> Street  
Suite 1200  
Cleveland, OH 44114-3108  
(216) 579-1700

Name of Sender: Steve Solomon

## COMMENTS

Date 7/10/07 Cleveland Time 10:30a  
For 5 page(s), including cover \_\_\_\_\_  
Client \_\_\_\_\_ File No. 36076051

This transmission was sent from

(216) 579-6073

If you have any problems with your reception, please telephone us at (216) 579-1700 and ask for:

The documents accompanying this facsimile transmission contain information from the law firm of Pearne & Gordon LLP which may be confidential or privileged. The information is intended to be for the use of the individual or entity named on this transmission sheet. If you are not the intended recipient, any disclosure, copying, distribution or use of the contents of this transmitted information is prohibited. If you have received this transmission in error, please notify us by telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you.

Re U.S.N. 10/803,400, Prepared claim set for discussion  
Ex. word: Please review & give me a call at your convenience.

*Proposed And.*

1. (currently amended) A method for the bonding of disk-shaped substrates, the substrates comprising an essentially plane disk-shaped first substrate with a central opening and with a first bonding surface and a back surface opposite the first bonding surface, and an essentially plane disk-shaped second substrate with a central opening and with a second bonding surface to be bonded to the first bonding surface by a layer of adhesive, the method comprising the following steps:

- providing the first substrate and the second substrate,
- applying liquid adhesive to the first bonding surface or the second bonding surface or both,
- subsequently positioning, in a vacuum chamber, the first substrate and the second substrate with the second bonding surface facing the first bonding surface at a distance,
- subsequently elastically deforming the first substrate in such a way that the first bonding surface assumes a bent shape and upholding the deformation by mechanical means acting on the first substrate,
- evacuating the vacuum chamber,
- moving the first substrate and the second substrate towards each other and establishing contact between them at an area of contact where adjacent edges of the first bonding surface and the second bonding surface touch, and upholding deformation of said first substrate by mechanical means acting thereon while said contact is being established.
- releasing the first substrate so as to allow it to assume its essentially plane configuration in such a way that the area of contact spreads essentially to the entire first and second bonding surfaces, and
- raising the pressure in the vacuum chamber to atmospheric pressure.

2. (currently amended) The method according to claim 1, characterized in that the first substrate is deformed in such a way that the ~~first contact~~first bonding surface assumes a concave or convex shape which is upheld by central mechanical means acting on the first substrate in the vicinity of the central opening of the same and circumferential mechanical means acting on the first substrate at positions offset towards the outer edge of the said first substrate.

3. (currently amended) The method according to claim 2, characterized in that the central mechanical means exert on the first substrate a force directed away from the second substrate while the circumferential mechanical means exert on the first substrate a force directed towards the second substrate, upholding a deformation of the first substrate where the shape of the first contact surface is concave.

4. (previously presented) The method according to claim 3, characterized in that the central mechanical means comprise mechanical stop means acting against the first bonding surface and the circumferential mechanical means comprise mechanical stop means acting on the back surface of the first substrate.

5. (previously presented) The method according to claim 3, characterized in that, due to the elastic deformation of the first substrate, the area of the first bonding surface adjacent the central opening is offset from a plane intersecting the circumference of the first bonding surface by between 1 mm and 3 mm.

6. (currently amended) The method according to claim 3, characterized in that the initial area of contact is a narrow annulus, or a portion thereof, adjacent to the outer edges of the first bonding surface and the second bonding surface ~~or a subset thereof~~.

7. (currently amended) A method for the bonding of disk-shaped substrates, the substrates comprising an essentially plane disk-shaped first substrate with a central opening and with a first bonding surface and a back surface opposite the first bonding surface, and an essentially plane disk-shaped second substrate with a central opening and with a second bonding surface to be

bonded to the first bonding surface by a layer of adhesive, the method comprising the following steps:

- providing the first substrate and the second substrate,
- applying liquid adhesive to the first bonding surface or the second bonding surface or both,
- positioning, in a vacuum chamber, the first substrate and the second substrate with the second bonding surface facing the first bonding surface at a distance,
- elastically deforming the first substrate in such a way that the first bonding surface assumes a concave shape and upholding the deformation by mechanical means acting on the first substrate,
- evacuating the vacuum chamber,
- ~~The method of claim 6, characterized in that~~ holding the first substrate is held in a slightly-tilted position with respect to the second substrate while moving the first substrate and the second substrate towards each other to establish an area of contact between them when contact is established, thereby assuring that the area of contact is at first restricted to a predefined sector of ~~the an~~ annulus adjacent the outer edges of the first bonding surface and the second bonding surface;
- releasing the first substrate so as to allow it to assume its essentially plane configuration in such a way that the area of contact spreads essentially to the entire first and second bonding surfaces, and
- raising the pressure in the vacuum chamber to atmospheric pressure.

8. (currently amended) The method according to claim 1, characterized in that the vacuum chamber is evacuated to a pressure of between 0.01 mbar and 100 mbar, ~~preferably between 0.05 mbar and 10 mbar and in particular between 0.1 mbar and 2 mbar.~~

9. (previously presented) The method according to claim 1, characterized in that the liquid adhesive is spread over the first bonding surface, the second bonding surface, or both by spinning the first substrate, the second substrate, or both, respectively.

Claims 10-17: (canceled)

18. (original) The method of claim 7, characterized in that the angle between the plane of the first substrate and the plane of the second substrate is at least  $1^{\circ}$  and not greater than  $3^{\circ}$ .

19. (previously presented) The method of claim 2, wherein the first substrate is deformed in such a way that the first contact surface assumes a concave shape.

20. (new) The method according to claim 8, said vacuum chamber being evacuated to a pressure of between 0.05 mbar and 10 mbar.

21. (new) The method according to claim 8, said vacuum chamber being evacuated to a pressure of between 0.1 mbar and 2 mbar.

22. (new) The method according to claim 1, wherein said area of contact is initially established adjacent outer edges of said first and second bonding surfaces.

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.